

REMARKS

Claims 1-4 and 6-21 are pending in this case. All claims are rejected.

In the Office Action mailed June 14, 2004:

Claims 1-4 and 6-13 were rejected under 35 U.S.C. § 112, second paragraph. This rejection is fully addressed in paragraph A.

Claims 1-4, 6-11, 13-16 and 18-20 were rejected under 35 U.S.C. § 103(a) over Silber et al (DE 198 20 734) and U.S. Patent No. 6,184,545 to Werner et al. This rejection is fully addressed in paragraph B.

Claim 12 was rejected under 35 U.S.C. § 103(a) over Silber et al and Werner et al as applied to claim 1, and further in view of Readdie et al (US Patent No. 5,254,869) . This rejection is fully addressed in paragraph C.

Claims 17 and 21 were rejected under 35 U.S.C. § 103(a) over Silber et al and Werner et al as applied to claims 14 and 18, and further view of Readdie et al. This rejection is fully addressed in paragraph D.

A. The Rejection of The Claims under § 112, Second Paragraph

Claim 1, as amended, recites "a drain region of" which clarifies the nature of the electric field. Support for the amendment to claim 1 is found in the specification at page 5, line 26 through page 6, line 1. No new matter has been introduced into claim 1. Claim 1 is deemed to be allowable, and the remaining rejected claims are also deemed to be allowable as depending upon an allowable base claim. Accordingly, withdrawal of the rejection of claims 1-4 and 6-13 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

B. The Rejection of Claims 1-4, 6-11, 13-16 and 18-20 under § 103(a)

The rejection of these claims, as amended, under 35 U.S.C. § 103(a) is respectfully traversed because the combination of references does not teach or suggest the claimed invention.

Claim 1 has been further amended to include the limitation of an "edge area" as is also found in claims 14 and 18. No new matter has been introduced into claim 1.

Claims 1, 14, and 18, therefore, all include the limitation that at least one of the doped regions of the Schottky diode of the claimed present invention are in a non-active "edge area" of the device. Having at least one of the doped regions in the "edge area" allows for superior high-voltage performance.

In contrast, neither, Silber nor Werner teach that one of the doped regions lie outside the boundary of the active device area. The combination of the references, therefore, also does not show at least one of the doped regions lying outside the boundary of the active device area, in an "edge area". In fact, the opposite is true. Silber and Werner appear to teach that the edge area is the same conductive type as the semiconductor layer, which undesirably limits breakdown voltage.

For at least this reason, neither Silber nor Werner, taken alone or in combination, describe or suggest every element of claims 1, 14, or 18. Claims 1, 14, and 18 are therefore deemed to be allowable as containing at least one limitation neither taught nor suggested in the combination of cited references. The remaining claims are deemed to be allowable as depending upon an allowable base claim. Accordingly, withdrawal of the rejection of claims 1-4, 6-11, 13-16 and 18-20 under 35 U.S.C. § 103(a) in view of Silber and Werner is respectfully requested.

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Amdt. dated October 7, 2004
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C. The Rejection of Claim 12 under § 103(a)

The rejection of claim 12 under 35 U.S.C. § 103(a) is respectfully traversed because claim 12 is deemed to be allowable as depending from allowable base claim 1, as amended.

D. The Rejection of Claim 17 and 21 under § 103(a)

The rejection of claim 17 and 21 under 35 U.S.C. § 103(a) is respectfully traversed. Claim 17 is deemed to be allowable as depending from allowable base claim 14. Similarly claim 21 is deemed to be allowable as depending from allowable base claim 18.

E. Conclusion

In view of all of the above, all pending claims 1-4 and 6-21 are believed to be allowable and the case is in condition for allowance, which action is respectfully requested. Should the Examiner be of the opinion that a telephone conference would expedite the prosecution of this case, the Examiner is requested to contact the attorney at the telephone number listed below.

A Request for One-Month Extension of Time is included with this Amendment. No further fees are believed due, however, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

10/8/04
Date


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